**The following are recommended features, technical requirements and support requirements for Virtual Classroom Tools. Organizations should select the necessary features and requirements, including identification of custom requirements not listed, prior to software evaluation.**
This information was adapted from and ©: *Executive Summary of Live E-Learning 2002: Virtual Classrooms, Synchronous Tools, and Web Conferencing Systems*, brandon-hall.com, June 2002


**Virtual Classroom Primary Features**
- Single-click access to session from URL in e-mail message
- Voice-over IP audio conferencing (multi-way, full duplex)
- Simultaneous voices can be handles
- Phone-based conference can also be used
- IP video-conferencing (real-time, multi-point)
- Video using standard USB camera
- Whiteboard
- Application sharing (one-to-many & many-to-many)
- Mark-up or annotation tools accessible by all participants
- Multiple types of content that can be delivered during live session (Word, Excel, PDF, JPEG, GIF, Animated GIF, Flash, DHTML, Java script)
- Native PowerPoint support
- Audio and video file recording and playback
- Pre-recorded sessions
- Participants receive materials automatically before and during sessions
- Instructor notified when content loaded on participant machines
- Can provide access to self-paced content before or after session
- Multiple facilitators
- Facilitator can import presentation on the fly
- Participants can raise hand
- Laughter and applause indicators
- Facilitate can control learner access to hand-raising, audio and tools
- Facilitator can allow interaction among participants
- Access to experts behind-the-scenes without interrupting instructor
- Yes/No polling, multiple choice polling, surveys, or questions with real-time reporting
- Administration of tests, evaluations and quizzes with real-time reporting and saved results
- Virtual breakout rooms (spontaneous and planned)
- Participants can send anonymous feedback/message to facilitator
- Participants can interact in public/private text chat
- Threaded discussions during meetings
- Threaded discussions for post-session interactions
- Instructor can enable or disable participants privileges
- Online notebook for participants
- Participants can "step-out" temporarily
- Countdown click indicating remaining time in session, break, etc…

**Content Development and Recording**
- Template(s) creating session agenda
- Template(s) for authoring course pages
- Template(s) for creating evaluation forms, quizzes, surveys
- Session content organization can be reused in other sessions
- "One click" recording of live sessions for later viewing
- Editing of recorded sessions (trim, combine, etc…)
- Indexing of recorded sessions
- Recording of whiteboard interactions for later viewing
- Automatic recording of application sharing
- Recorded sessions can be viewed with standard media player
- Recorded sessions can be viewed in non-linear, browsable format
- Recorded content can be organized in a tool-specific repository
- Recorded content can be managed in an external repository

**Management and Administration**
- Instant events can be created
- User and event data are stored in a database
- Batch importing of users from external database
- Online self registration
- Group (batch) enrollment
- User management (search, filter, edit, etc…)
- Web-based scheduling and registration
- Management of multiple time zones
- Can assign facilitators to sessions
- Automatic e-mail notification to participants and managers
- Tracking and reporting of enrollment and attendance data
- Tracking and reporting of assessment/evaluation data
- Custom reports
- Exporting of report to data
- Data and scheduling integration and with LMS
- Can limit class size

**Customer Support and Services**
- 24 x 7 human technical support is available
- Session/event monitoring is available
- Dedicate support is available during live sessions
- Online facilitators can be provided
- Facilitator training is available
- Event consultation/preparation support is available
- Online documentation/help is available for users
- Support services include monthly public training
- Support services include user forums and annual users' conference

**Technology:  Software and Architecture**
- Tool is available as locally installed solution
- Tool is available as hosted ASP solution with uptime rate of 99%
- Customizable user interface for co-branding
- Departmental and personalized catalogs/views
- Features can be enabled or disabled
- Participants require web browser only
- Participants use "thin-client" web application
- Both "browser-only" and client application are available
- Full product functionality is available with low-bandwidth (28.8K) connection
- Adaptive video bandwidth for better performance over slow/variable connections
- Connection and audio check prior to session start
- Content pre-caching on participant's computer
- Supports 1000s of users simultaneously for live and recorded sessions
- Multiple servers can be administered as if they were a single system
- Auto-upgrade of client application whenever new version/patch becomes available

**Technology:  Standards and Interoperability**
- Compliant with Section 508 guidelines
- AICC, level I and level II compliant
- SCORM compliant
- IMS metadata tag compliant
- Compliant with IMS Virtual Learning Environment extension
- Events can run over IP multicast infrastructure
- SQL and Oracle database support
- Runs on Sun Solaris
- Runs on Windows NT
- Runs on Linux
- Microsoft BackOffice integration
- API tools to support integration with LMS, intranets, etc…

**Technology:  Security**
- Multiple access levels for different types of users
- Access rights can be grouped to form access profiles
- Password protected session access
- SSL user log-in encryption
- Full access and functionality behind corporate firewalls and proxy servers
- Content encryption/download protection
- Recorded sessions can be protected (made non-transferable)